

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

BOARD ORDER NO. 6-00-15  
WDID NO. 6B360304026

YERMO

REVISED WASTE DISCHARGE REQUIREMENTS  
FOR

36-AA-0047

SAN BERNARDINO COUNTY WASTE SYSTEMS DIVISIONS;  
YERMO CLASS III LANDFILL

San Bernardino County

The California Regional Water Quality Control Board, Lahontan Region (Regional Board) finds:

1. Discharger

For the purpose of this Regional Board Order (Order), the County of San Bernardino is referred to as the "Discharger" and the United States Bureau of Land Management is the landowner.

2. Landfill

The Yermo Class III Landfill is referred to as the "Landfill" that stopped receiving waste in June 1998. For the purposes of this Order, the Yermo Class III Landfill is referred to as the "Landfill."

3. Order History

The Regional Board previously adopted Waste Discharge Requirements (WDRs) for the Landfill under Board Order No. 6-85-125, which was adopted on October 10, 1985. Board Order No. 6-93-100 was adopted on September 9, 1993, and amended the WDRs to incorporate the requirements of Title 40, Code of Federal Regulations, Parts 257 and 258 (Subtitle D) as implemented in the State of California under State Water Resources Control Board (SWRCB) Resolution No. 93-62. Board Order No. 6-95-122 revised the WDRs to require the Discharger to achieve compliance with the revised requirements of Article 5, Chapter 15, Title 23, California Code of Regulations (CCR) (Chapter 15), to incorporate requirements of the previously adopted Board Order amendment No. 6-93-100, and to document the landfill operation which involved accepting waste only one day per month.

4. Reason for Action

The Regional Board is revising these Closure WDRs to require the Discharger to achieve compliance with the revised requirements of Sections 20385, 20415 and 20420, Title 27, CCR pertaining to Closure and Post-Closure Maintenance. This Order requires continuing the Detection Monitoring Plan (DMP) in accordance with Section 20420 of Title 27. The site is in closure construction and is no longer being used for disposal of wastes. The site stopped receiving waste in June 1998.

This Order shall remain in effect until it is determined whether there are any water quality problems, or a threat of water quality problems. Currently, the Discharger is implementing final Landfill closure. This Order approves the Final Closure and Post Closure Maintenance Plan (CPCMP).

5. Landfill Location

The Landfill is located approximately four miles northeast of the Community of Yermo, San Bernardino County, within Section 22, T10N, R2E, SBB&M, as shown on Attachment "A," which is made part of this Order.

6. Description of Landfill

The Landfill is unlined and is classified as a Small Landfill as defined in Subtitle D. As such, Subtitle D requirements became effective for this Landfill on April 9, 1994. Regional Board staff have reviewed information submitted by the Discharger which illustrates the footprint of waste discharged as of April 9, 1994. The footprint documents the limits of waste which are exempt from Subtitle D requirements for composite liners, and is shown on Attachment "B", which is made part of this Order.

7. Authorized Disposal Site

The footprint of waste shown in Attachment "B" is the only authorized disposal site. The footprint of waste shown in Attachment "B" encompasses approximately 12.5 acres of the total 40 acre parcel.

8. Waste Classification

The Landfill received waste derived from the Community of Yermo and nearby communities. The waste is defined in Sections 20220 and 20230, Title 27, CCR, as inert and non-hazardous solid waste, respectively. The waste is defined as municipal solid waste in Subtitle D.

9. Waste Management Unit Classification

Pursuant to Section 20260, Title 27, CCR, the Landfill is classified as a Class III waste management unit. The Landfill is classified as a Small Landfill in Subtitle D.

10. Subtitle D Compliance Status

Board Order amendment No. 6-93-100 required the submittal of several items in order to comply with Subtitle D. The Discharger has submitted complete information regarding the acceptance of liquids, the existing waste footprint, the distance from the Landfill to the nearest drinking water source, whether the Landfill is located in a 100 year floodplain or a wetlands, and a revised Water Quality Protection Standard (WQPS) which meets the requirements of Subtitle D and Chapter 15, Article 5, Title 23, CCR. The above listed items which have already been submitted fulfill the submittal requirements of Subtitle D as implemented by SWRCB Resolution No. 93-62.

11. Water Quality Protection Standard

The WQPS consists of constituents of concern (including monitoring parameters), concentration limits, monitoring points, and the point of compliance. The standard applies over the active life of the Landfill, closure and post-closure maintenance period, and the compliance period. The constituents of concern, monitoring points, point of compliance, and concentration limits are described in Monitoring and Reporting Program 00-15, which is attached to and made part of this Order.

12. Statistical Methods

Statistical analysis of monitoring data is necessary for the earliest possible detection of a statistically significant release of waste from the Landfill. Section 20420, Title 27, CCR require statistical data analysis. Monitoring and Reporting Program No. 00-15 includes site-specific methods for statistical data analysis.

13. Detection Monitoring

Pursuant to Section 20385, Title 27, CCR, the Discharger has been conducting a DMP. The current DMP has been designed to monitor the ground water and soil-pore gas for evidence of a release. No evidence of a release has been noted to date in the ground water, however migration of landfill gas has been detected in the vadose zone.

14. Evaluation Monitoring

An Evaluation Monitoring Program (EMP) may be required, pursuant to Section 20425, Title 27, CCR, to evaluate evidence of a release if detection monitoring and/or verification procedures indicate evidence of a release.

15. Corrective Action

A Corrective Action Program (CAP) to remediate detected releases from the Landfill may be required pursuant to Section 20430, Title 27, CCR, should results of an EMP warrant a CAP.

16. Site Geology

The Landfill rests on top of coarse grained alluvial material which consists primarily of gravel, sand, and silt, and minor amounts of interbedded clay. Consolidated and semi-consolidated sedimentary deposits outcrop to the north and northwest of the Landfill. The Calico Fault, which is a northwest trending right-lateral strike slip fault, is located approximately one mile southwest of the Landfill.

17. Site Hydrogeology

Depth to ground water beneath the Landfill ranges from 217 to 281 feet below ground surface. Ground water flows from the Landfill toward the southwest. Ground water monitored beneath the Landfill is present in the unconsolidated alluvial deposits.

18. Site Surface Hydrology and Storm Water Runoff

All storm water from the Landfill is regulated under the State Amended General Industrial Activities Storm Water Permit.

19. Site Topography

Site topography is shown on Attachment "B", which is made a part of this Order.

20. Climatology

The precipitation in the area of the Landfill is approximately 4.6 inches annually. The evaporation rate is approximately 90 inches annually.

21. Land Uses

The land use at and surrounding the Landfill consists of the following:

- a. various residences and commercial buildings in the Community of Yermo; and,
- b. open desert land.

22. Closure and Post-Closure Maintenance

The Discharger, in June 1997 has submitted a Final CPCMP. In a letter dated February 26, 1998 the Regional Board staff deemed the plan complete and technically adequate. The Final CPCMP for the Yermo Landfill consists of an alternate cover system to the prescriptive standard. The cover system will be composed of a two-foot thick foundation layer composed of select soils and a two and a half-foot thick layer of select soils that will comprise the vegetative cover layer. The Discharger has demonstrated through an "alternative cover demonstration project" that the monolithic cover will meet or exceed the prescribed performance criteria and will be more economical for site closure than the prescriptive standards. This Order requires that the Discharger review the plan annually to determine if significant changes in the operation of the Landfill warrant an update of the plan. Pursuant to Board Resolution No. 6-91-938, this approves the Final CPCMP.

23. Alternative to the Prescriptive Cover

The Discharger has submitted the Final CPCMP with an alternative engineering design to the prescriptive cover. Pursuant to Section 21140, Title 27, CCR, the alternative final cover design shall meet the performance requirements of the prescriptive covers. The Discharger has completed a Report of Performance Monitoring for Alternative Cover Demonstration Projects, and the conclusion is that the monofill cover constructed at the Phelan Landfill (demonstration project) is an effective final cover system, when considering that a prescriptive final cover at the site would be subject to desiccation-relative performance degradation and whose performance is predicted to an order of magnitude less effective than the monofill final cover.

24. Financial Assurance

The Discharger has provided documentation that a financial assurance fund has been developed for closure, post-closure maintenance, and potential corrective action requirements. The fund has been developed as a single entity for all landfills owned and/or operated by the County of San Bernardino. The fund meets the requirement of Sections 22247 and 22245, Title 27, CCR for financial assurance. This Order requires the Discharger to report the amount of money available in the fund as part of the annual report. This Order also requires that the Discharger demonstrate in an annual report that the amount of financial assurance is adequate, or increase the amount of financial assurance.

25. Receiving Waters

The receiving waters are the ground waters of the Lower Mojave Hydrologic Area of the Mojave Hydrologic Unit (Department of Water Resources Hydrologic Unit No. 628.50).

26. Lahontan Basin Plan

The Regional Board adopted a Water Quality Control Plan for the Lahontan Region (Basin Plan) which became effective on March 31, 1995. This Order implements the Basin Plan.

27. Beneficial Ground Water Uses

The present and probable beneficial uses of the ground waters of Lower Mojave River Valley Ground Water Basin as set forth and defined in the Basin Plan are:

- a. municipal and domestic supply;
- b. agricultural supply;
- c. industrial service supply;
- d. freshwater replenishment; and,
- e. aquaculture.

28. California Environmental Quality Act

These Closure WDRs govern an existing Landfill that the Discharger formerly operated. The project consists only of the inactive status of the closed Landfill, and is therefore exempt from the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) in accordance with Section 15301 of the CEQA Guidelines.

29. Notification of Interested Parties

The Regional Board has notified the Discharger and all known interested parties of its intent to adopt revised WDRs for the project.

30. Consideration of Interested Parties

The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

**IT IS HEREBY ORDERED** that the Discharger shall comply with the following:

I. DISCHARGE SPECIFICATIONS

A. Receiving Water Limitations

Discharges from the Landfill shall not cause the presence of the following substances or conditions in ground waters of the Lower Mojave River Valley Ground Water Basin:

1. any perceptible color, odor, taste, or foaming;
2. any presence of toxic substances in concentrations that individually, collectively, or cumulatively cause detrimental physiological response in humans, plants, animals, or aquatic life; and
3. the presence of constituents of concern in concentrations that exceed background levels.

## II. REQUIREMENTS AND PROHIBITIONS

### A. General

1. The discharge shall not cause a pollution as defined in Section 13050 of the California Water Code, or a threatened pollution.
2. The discharge shall not cause a nuisance as defined in Section 13050 of the California Water Code.
3. The discharge of solid wastes, leachate, or any other deleterious material to the ground waters of the Lower Mojave River Valley Ground Water Basin is prohibited.
4. The closed disposal site shall be protected from inundation, washout, or erosion of wastes and erosion of covering materials resulting from a storm or a flood having a recurrence interval of once in 100 years.
5. Surface drainage from tributary areas, and internal site drainage from surface or subsurface sources shall not contact or percolate through solid wastes discharged at the site.
6. The exterior surfaces of the disposal site shall be graded to promote lateral runoff of precipitation and to prevent ponding.
7. Water used for dust control during closure operations shall be limited to a minimal amount. A "minimal amount" is defined as that amount which will not result in runoff.
8. All water used for dust control shall not contain detected concentration of volatile organic compounds (VOCs).
9. The Discharger shall remove and relocate any waste which is or has been discharged at the disposal site in violation of these requirements. The waste shall be relocated to a landfill which is permitted to receive such wastes. All removal and relocation projects shall be coordinated with regulatory agencies, including the County of San Bernardino Department of Environmental Health Services.
10. At any given time, the concentration limit for each constituent of concern shall be equal to the background value of that constituent.

11. The concentration limit for each constituent of concern shall not be exceeded.

B. Detection Monitoring Program

The Discharger shall maintain the current DMP as required in Section 20242, Title 27, CCR.

C. Evaluation Monitoring Program

The Discharger shall establish an EMP whenever there is statistically significant evidence of a release from the Landfill as required in Section 20425, Title 27, CCR.

D. Corrective Action Program

The Discharger shall institute a CAP when required pursuant to Section 20430, Title 27, CCR, should the results of the EMP warrant a CAP.

III. DATA ANALYSIS

A. Statistical Analysis

Statistical analysis of ground water and unsaturated zone DMP data shall be conducted. Analysis shall be conducted in accordance with statistical methods detailed in Monitoring and Reporting Program No. 00-15.

B. Nonstatistical Analysis

The Discharger shall determine whether there is significant physical evidence of a release from the Landfill. Significant physical evidence may include unexplained volumetric changes in the Landfill, unexplained stress in biological communities, unexplained changes in soil characteristics, visible signs of leachate migration, unexplained water table mounding beneath or adjacent to the Landfill, or any other change to the environment that could reasonably be expected to be the result of a release from the Landfill.

C. Verification Procedures

1. The Discharger shall immediately initiate verification procedures as specified below whenever there is a determination by the Discharger or Executive Officer that there is statistical or non-statistical evidence of a release. If the Discharger declines the opportunity to conduct verification procedures, the Discharger shall submit a technical report as described below under the heading Technical Report Without Verification Procedures.
2. The verification procedure shall only be performed for the constituent(s) that has shown evidence of a release, and shall be performed for those monitoring points at which a release is indicated.
3. The Discharger shall either conduct a composite retest using data from the initial sampling event with all data obtained from the resampling event or shall conduct a discrete retest in which only data obtained from the resampling event shall be analyzed in order to verify evidence of a release.

4. The Discharger shall report to the Regional Board by certified mail the results of the verification procedure, as well as all concentration data collected for use in the retest, within seven days of the last laboratory analysis.
5. The Discharger shall determine, within 45 days after completion of sampling, whether there is statistically significant evidence of a release from the Landfill at each monitoring point. If there is statistically significant evidence of a release, the Discharger shall immediately notify the Regional Board by certified mail. The Executive Officer may make an independent finding that there is statistical evidence of a release.
6. If the Discharger or Executive Officer verify evidence of a release, the Discharger is required to submit, within 90 days of a determination that there is or was a release, in a technical report pursuant to Section 13267(b) of the California Water Code. The report shall propose an EMP **OR** make a demonstration to the Regional Board that there is a source other than the Landfill that caused evidence of a release.

D. Technical Report Without Verification Procedures

If the Discharger chooses not to initiate verification procedures, a technical report shall be submitted pursuant to Section 13267(b) of the California Water Code. The report shall propose an EMP, **OR**, attempt to demonstrate that the release did not originate from the Landfill.

IV. PROVISIONS

A. Rescission of Waste Discharge Requirements

Board Order No. 6-95-122 is hereby rescinded.

B. Closure Plan Approval

The implemented Final CPCMP dated June 23, 1997, which includes an alternative final cover is approved.

C. Standard Provisions

The Discharger shall comply with the "Standard Provisions for Waste Discharge Requirements," dated September 1, 1994, in Attachment "C", which is made part of this Order.

D. Monitoring and Reporting

1. Pursuant to the California Water Code Section 13267(b), the Discharger shall comply with the Monitoring and Reporting Program No. 00-15 as specified by the Executive Officer.
2. The Discharger shall comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made part of the Monitoring and Reporting Program.




V. TIME SCHEDULE

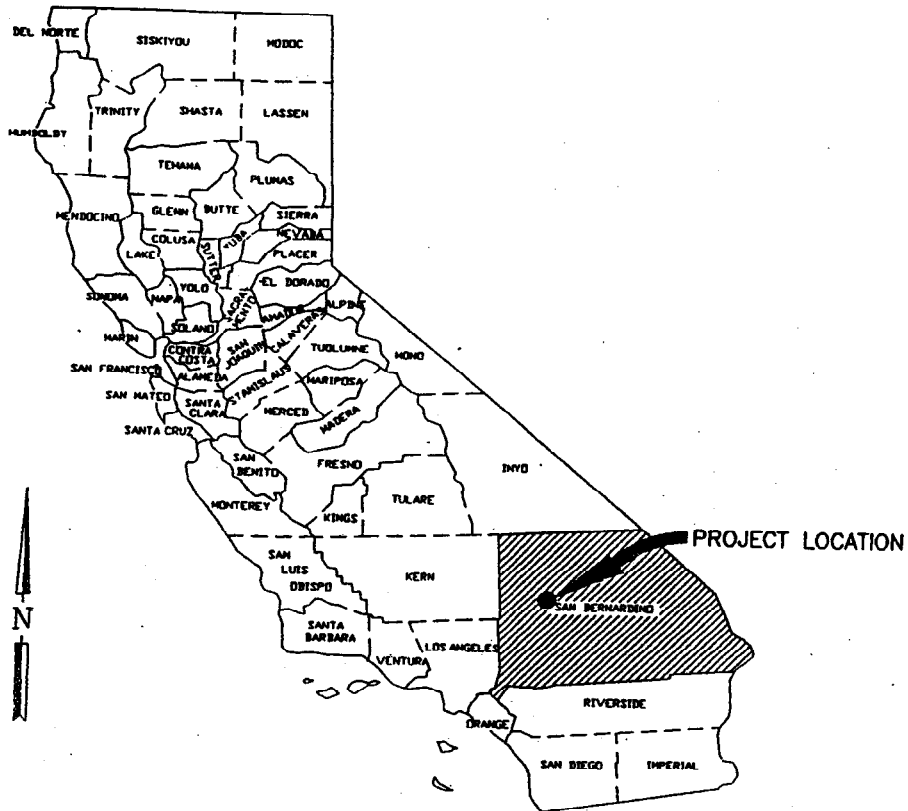
Closure and Completion Reporting

This Order requests the Final Closure Completion Report, following the completion of the Closure Construction. The Final Closure Completion Report should be submitted within 90 days of completion of construction activities.

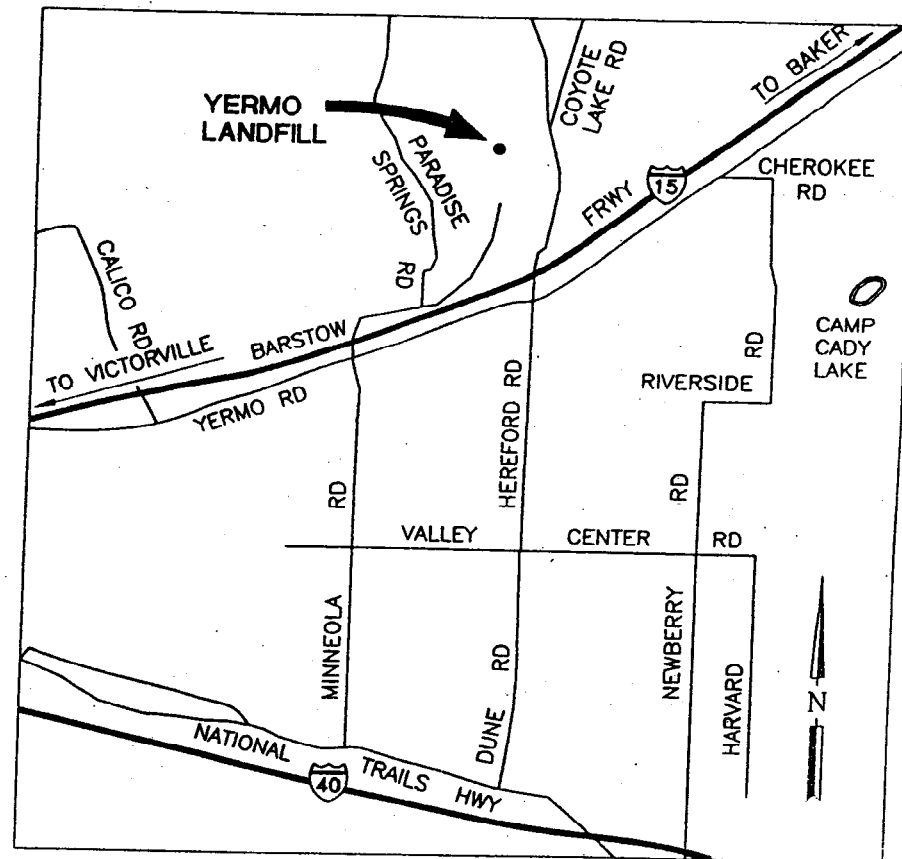
I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by California Regional Water Quality Control Board, Lahontan Region, on March 9, 2000.

  
HAROLD J. SINGER  
EXECUTIVE OFFICER

Attachments: A. Location and Topography Maps  
B. Landfill Footprint of Waste  
C. Standard Provisions for Waste Discharge Requirements



**VICINITY MAP**  
NTS



**LOCATION MAP**  
NTS

**FIGURE 1**

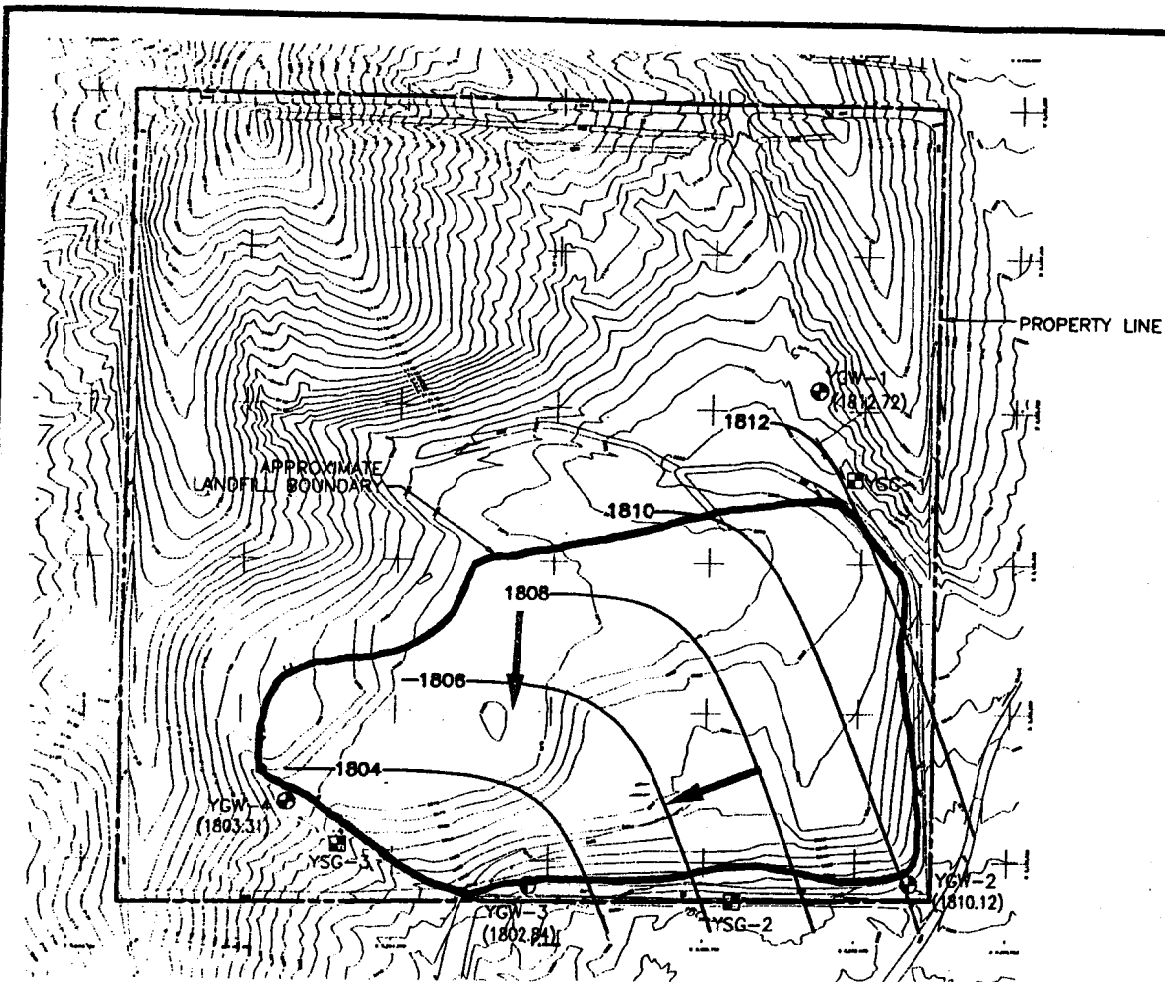
**BAS**  
(909) 860-7777  
**BRYAN A. STIRRAT & ASSOCIATES**  
CML AND ENVIRONMENTAL ENGINEERS  
1360 VALLEY VISTA DRIVE DIAMOND BAR, CA 91765

YERMO LANDFILL

# **SITE VICINITY/LOCATION MAP**

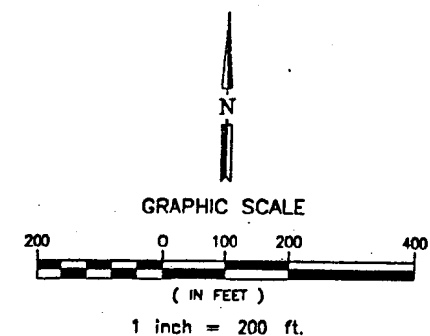
JOB NO.	9663-104
DATE	10-2-96
DRAWN BY	S.P.
CHECKED BY	V.B.

## **ATTACHMENT A**



**EXPLANATION:**

- YGW-1**  
 (1812.72)  
 GROUNDWATER MONITORING WELL LOCATION  
 (GROUNDWATER ELEVATION IN FEET ABOVE  
 MEAN SEA LEVEL)
- YSG-1**  
 SOIL-PORE GAS MONITORING PROBE LOCATION
- 1810**  
 CONTOUR LINE SHOWING GROUNDWATER  
 POTENTIOMETRIC SURFACE ELEVATIONS  
 (CONTOUR INTERVAL = 2 FEET)
- DIRECTION OF GROUNDWATER FLOW



## ATTACHMENT B

**REFERENCE:**

SAN BERNARDINO COUNTY WASTE SYSTEM  
DIVISION, CAD MAP AS OF 9/13/97.

FIGURE 15-1

AUGUST 1999 GROUNDWATER EQUIPOTENTIAL CONTOURS  
WATER QUALITY MONITORING REPORT  
THIRD QUARTER (SUMMER) 1999  
YERMO SANITARY LANDFILL  
SAN BERNARDINO COUNTY, CA



**GeoLogic Associates.**  
Geologists, Hydrogeologists, and Engineers

DRAWN BY:	DATE:	JOB NO.
VL	SEPTEMBER 1999	9975

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

**STANDARD PROVISIONS**  
**FOR WASTE DISCHARGE REQUIREMENTS**

ATTACHMENT "C"

1. **Inspection and Entry**

The Discharger shall permit Regional Board staff:

- a. to enter upon premises in which an effluent source is located or in which any required records are kept;
- b. to copy any records relating to the discharge or relating to compliance with the Waste Discharge Requirements;
- c. to inspect monitoring equipment or records; and
- d. to sample any discharge.

2. **Reporting Requirements**

- a. Pursuant to California Water Code 13267(b), the Discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.
- b. Pursuant to California Water Code Section 13260(c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board at least 120 days in advance of implementation of any such proposal. This shall include, but not limited to, all significant soil disturbances.
- c. The Owners/Discharger of property subject to Waste Discharge Requirements shall be considered to have a continuing responsibility for ensuring compliance with applicable Waste Discharge Requirements in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the Waste Discharge Requirements shall be reported to the Regional Board. Notification of applicable Waste Discharge Requirements shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.
- d. If a Discharger becomes aware that any information submitted to the Regional Board is incorrect, the Discharger shall immediately notify the Regional Board, in writing and correct that information.
- e. Reports required by the Waste Discharge Requirements, and other information requested by the Regional Board, must be signed by a duly authorized representative of the Discharger. Under Section 13268 of the California Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation.

- f. If the Discharger becomes aware that their Waste Discharge Requirements (or permit) is no longer needed (because the project will not be built or the discharge will cease) the Discharger shall notify the Regional Board in writing and request that their Waste Discharge Requirements (or permit) be rescinded.

3. Right to Revise Waste Discharge Requirements

The Regional Board reserves the privilege of changing all or any portion of the Waste Discharge Requirements upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the Waste Discharge Requirements may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and reissuance, or modification.

5. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the Waste Discharge Requirements which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the Waste Discharge Requirements. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger, when necessary to achieve compliance with the conditions of the Waste Discharge Requirements.

7. Waste Discharge Requirement Actions

The Waste Discharge Requirements may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for waste discharge requirement modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the Waste Discharge Requirements conditions.

8. Property Rights

The Waste Discharge Requirements do not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

9. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the Waste Discharge Requirements including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the Waste Discharge Requirements shall be kept and maintained by the Discharger and be available at all times to operating personnel.

11. Severability

Provisions of the Waste Discharge Requirements are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

12. Public Access

General public access shall be effectively excluded from disposal/treatment facilities.

13. Transfers

Providing there is no material change in the operation of the facility, this Order may be transferred to a new owner or operator. The owner/operator must request the transfer in writing and receive written approval from the Regional Board's Executive Officer.

14. Definitions

- a. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.
- b. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

15. Storm Protection

- a. All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

REVISED MONITORING AND REPORTING PROGRAM NO. 00-15  
WDID NO. 6B360304026

FOR

SAN BERNARDINO COUNTY WASTE SYSTEMS DIVISIONS;  
YERMO CLASS III LANDFILL

San Bernardino County

I. WATER QUALITY PROTECTION STANDARD

A. Ground Water

1. Point of Compliance and Monitoring Points

The Point of Compliance as defined in Section 20405, Title 27, California Code of Regulations (CCR) is "a vertical surface located at the hydraulically downgradient limit of the waste management unit that extends through the uppermost aquifer underlying the unit." Ground water monitoring wells have been installed at monitoring points upgradient of the Landfill and at the Point of Compliance as part of the Detection Monitoring Program (DMP). The locations of the ground water monitoring wells are illustrated on Attachment "A," which is made a part of this Monitoring and Reporting Program.

2. Monitoring Parameters and Constituents of Concern

The monitoring parameters are the metal surrogates chloride, sulfate, nitrate as nitrogen, total dissolved solids, and volatile organic constituents as defined by Appendix I of 40 CFR, Part 258. The constituents of concern are those constituents listed in Appendix I and Appendix II of 40 CFR, Part 258.

3. Concentration Limits

The Discharger has determined background water quality data for all constituents of concern contained in this Monitoring and Reporting Program. The concentration limit for each inorganic constituent of concern is as follows:

<u>Constituent</u>	<u>Concentration Limit (mg/L)</u>
antimony	0.04
arsenic	0.047
barium	0.096
beryllium	0.0003
cadmium	0.002
chromium (total)	0.005
cobalt	0.007
copper	0.003

<u>Constituent</u>	<u>Concentration Limit (mg/L)</u>
lead	0.018
mercury	0.0002
nickel	1.28
selenium	0.489
silver	0.004
thallium	0.061
tin	0.9
vanadium	0.004
zinc	0.31
cyanide	0.01
sulfide	0.10
total dissolved solids	5868.40
sulfate	2403.50
chloride	1539.60
nitrate as nitrogen	27.20
pH (upper limit)	8.25
pH (lower limit)	7.10

The concentration limits for each man-made organic constituent which is not proven to have originated from a source other than the Landfill is the laboratory detection limit for that constituent.

B. Unsaturated Zone

1. Monitoring Points

An unsaturated zone monitoring system currently exists at the site, composed of three soil-gas probes. The locations of the soil-gas probes are shown on Attachment "A" of this Monitoring and Reporting Program.

2. Monitoring Parameters and Constituents of Concern

The monitoring parameters for soil gas are the gases methane, carbon dioxide, oxygen, and nitrogen. The constituents of concern are the monitoring parameters and the volatile organic constituents listed under the laboratory analytical method EPA T014.

3. Concentration Limits

The concentration limits for all constituents of concern in soil gas shall be the method detection limit. The monitoring parameters shall not be required to have concentration limits because these parameters exist naturally in soil gas and development of background concentrations would be technically infeasible.



## II. MONITORING

### A. Detection Monitoring

A DMP has been developed by the Discharger as required by Sections 20385, 20415, and 20420, Title 27, CCR. A monitoring report shall be submitted semi-annually which reports the results of ground water and unsaturated zone monitoring conducted in accordance with the DMP. Monitoring shall be completed as follows:

#### 1. Ground Water

##### a. Monitoring Points

Wells and YGW-2, YGW-3 and YGW-4 are utilized as monitoring points for detection monitoring at the point of compliance. Well YGW-1 is currently utilized for background water quality monitoring. The ground water monitoring well locations are shown on Attachment "A" of this Monitoring and Reporting Program.

##### b. Monitoring Parameters

Ground water samples shall be collected and submitted for laboratory analysis at all monitoring points semi-annually for the monitoring parameters listed in this Section I.A.2 of this Monitoring and Reporting Program.

##### c. Constituents of Concern

Ground water samples shall be collected and submitted for laboratory analysis at all monitoring points once every five years for constituents of concern listed in this Monitoring and Reporting Program.

##### d. Aquifer Characteristics

The parameters listed in Table 1.a. shall be calculated and reported in tabular form semi-annually. The calculations listed in Table 1.b. shall be reported in graphic form semi-annually.

**Table 1.a.**  
**Ground Water Field Measurements**

<b><u>Parameter</u></b>	<b><u>Units</u></b>
Depth to Ground Water	feet bgs
Static Water Level	feet above mean sea level
Electrical Conductivity	micromhos/cm
pH	pH Units
Temperature	deg. F or C
Turbidity	NTUs

**Table 1.b.**  
**Ground Water Calculations**

<b><u>Parameter</u></b>	<b><u>Units</u></b>
Slope of Ground Water	ft/mile
Direction of Ground	
Water Gradient	degrees
Velocity of Ground	
Water Flow	feet/year

e. **Cover Monitoring**

The Discharger has installed an interim cover over the closed Landfill. The cover has been vegetated and graded to a slope, which is intended to promote runoff and prevent ponding. The Discharger shall monitor and report on the condition of the cover to ensure the integrity of the cover and evaluate the cover's capability to promote runoff and prevent ponding.

After construction of the final cover, the Discharger shall continue to monitor and report on the condition of the cover to ensure the integrity of the cover and evaluate the cover's capability to promote runoff and prevent ponding.

2. **Unsaturated Zone**

a. **Monitoring Points**

The unsaturated zone monitoring system at the Landfill currently consists of three soil gas monitoring wells, which are YSG-1, YSG-2, and YSG-3. The soil gas well locations are shown on Attachment "A" of this Monitoring and Reporting Program.

b. Monitoring Parameters and Constituents of Concern

The monitoring parameters for soil gas shall be the gases methane, carbon dioxide, oxygen, and nitrogen. The constituents of concern shall be the monitoring parameters and the volatile organic constituents listed under laboratory analytical method EPA T014.

c. Concentration Limits

The concentration limits for all constituents of concern in soil gas shall be the laboratory detection limits. The monitoring parameters shall not be required to have concentration limits because these parameters exist naturally in soil gas and development of concentration limits would be technically infeasible.

III. DATA ANALYSIS

A. Site Specific Statistical Analysis Method

The Executive Officer may approve statistical methods which are different from the general methods listed in Subtitle D. The Discharger has proposed to analyze data by the tolerance limits method of statistical analysis using interwell comparisons. The method proposed by the Discharger is capable of detecting a statistically significant release from the Landfill. The concentration limits for ground water have been developed using the proposed statistical method. Future data analysis shall be conducted using the tolerance interval interwell comparisons method.

B. Nonstatistical Method

In accordance with the WDRs, evaluation monitoring will be initiated without statistical verification if there is significant physical evidence of a release. Physical evidence can include time series plots, vegetation loss, or soil discoloration. Each semi-annual report shall comment on these physical elements.

IV. REPORTING REQUIREMENTS

A. Scheduled Reports To Be Filed With The Regional Board

The following periodic reports shall be submitted to the Regional Board as specified below.

1. Semi-Annual Detection Monitoring Reports

- a. Results of sampling, laboratory analysis of ground water and soil gas, and statistical data analysis.

- b. An Executive Summary shall accompany each report. The summary shall include a discussion of any requirement violations found since the last report was submitted, and shall describe actions taken or planned for correcting those violations.
- c. If the Discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting this schedule will be satisfactory. If no violations have occurred since the last submittal, this shall be stated in the letter of transmittal.
- d. For each monitored ground water body, a description and graphical presentation of the velocity and direction of ground water flow under/around the Unit, based upon water level elevations taken during the collection of the water quality data submitted in the report. Provide a map or aerial photograph showing the locations of vadoze zone and ground water monitoring points.
- e. The Post Closure Maintenance Report shall contain a description of the conditions of the cover materials. Specifically, comments regarding any subsidence or soil cover washouts, which have occurred, and the capability of the cover to promote runoff and prevent ponding should be included. In the case where subsidence, washouts or other damage to the cover is noted, the report shall indicate the actions taken to repair cover material so that the event will not reoccur

B. Unscheduled Reports To Be Filed With The Regional Board

1. Notice of Tentative Release

The following reports shall be submitted to the Regional Board as specified below.

Should the appropriate statistical or non-statistical data analysis indicate that a release is tentatively identified, the Discharger shall:

- a. Immediately notify the Regional Board verbally as to the monitoring point(s) and constituent(s) or parameter(s) involved;
- b. Provide written notification by certified mail within seven days of such determination (Section 20420(j), Title 27, CCR). The notification should indicate the Discharger's intent to conduct verification sampling, initiate evaluation monitoring procedures, or demonstrate that a source other than the Landfill is responsible for the release.

- c. If the Discharger chooses to attempt to demonstrate that a source other than the Landfill is responsible for the release, the Discharger shall submit a supporting technical report within 90 days of detection of the release.

2. Evaluation Monitoring

The Discharger shall, within 90 days of verifying a release, submit a technical report pursuant to Section 13267(b) of the California Water Code proposing an Evaluation Monitoring Program. If the Discharger decides not to conduct verification procedures, or decides not to make a demonstration that a source other than the Landfill is responsible for the release, the release will be considered verified.

3. Engineering Feasibility Study Report

The Discharger shall, within 180 days of verifying the release, submit an Engineering Feasibility Study (Section 20420, Title 27, CCR) to preliminarily propose methods for corrective action.

C. General Provisions

The Discharger shall comply with Attachment "B," the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made part of this Monitoring and Reporting Program.

D. Submittal Periods

Semi-annual monitoring reports shall be submitted to the Regional Board on the 30th day of the month following the semester.

E. Annual Report

On or before January 31, 2001, and before January 31 every year thereafter the Discharger shall submit an annual report to the Regional Board following the January to December monitoring period. This report shall include the items described in the General Provisions for Monitoring and Reporting.

F. Financial Assurance

On or before January 31, 2001, and before January 31 every year thereafter the Discharger shall submit an annual financial assurance report to the Regional Board. This report shall summarize the amount of money available in the fund. This report should also provide a demonstration that the amount of financial assurance is adequate, or the need to increase the amount of financial assurance.

Ordered by:



HAROLD J. SINGER  
EXECUTIVE OFFICER

Dated: March 9, 2000

- Attachments: A. Location of Monitoring Points  
B. General Provisions for Monitoring and Reporting

3/2000 yermomrp

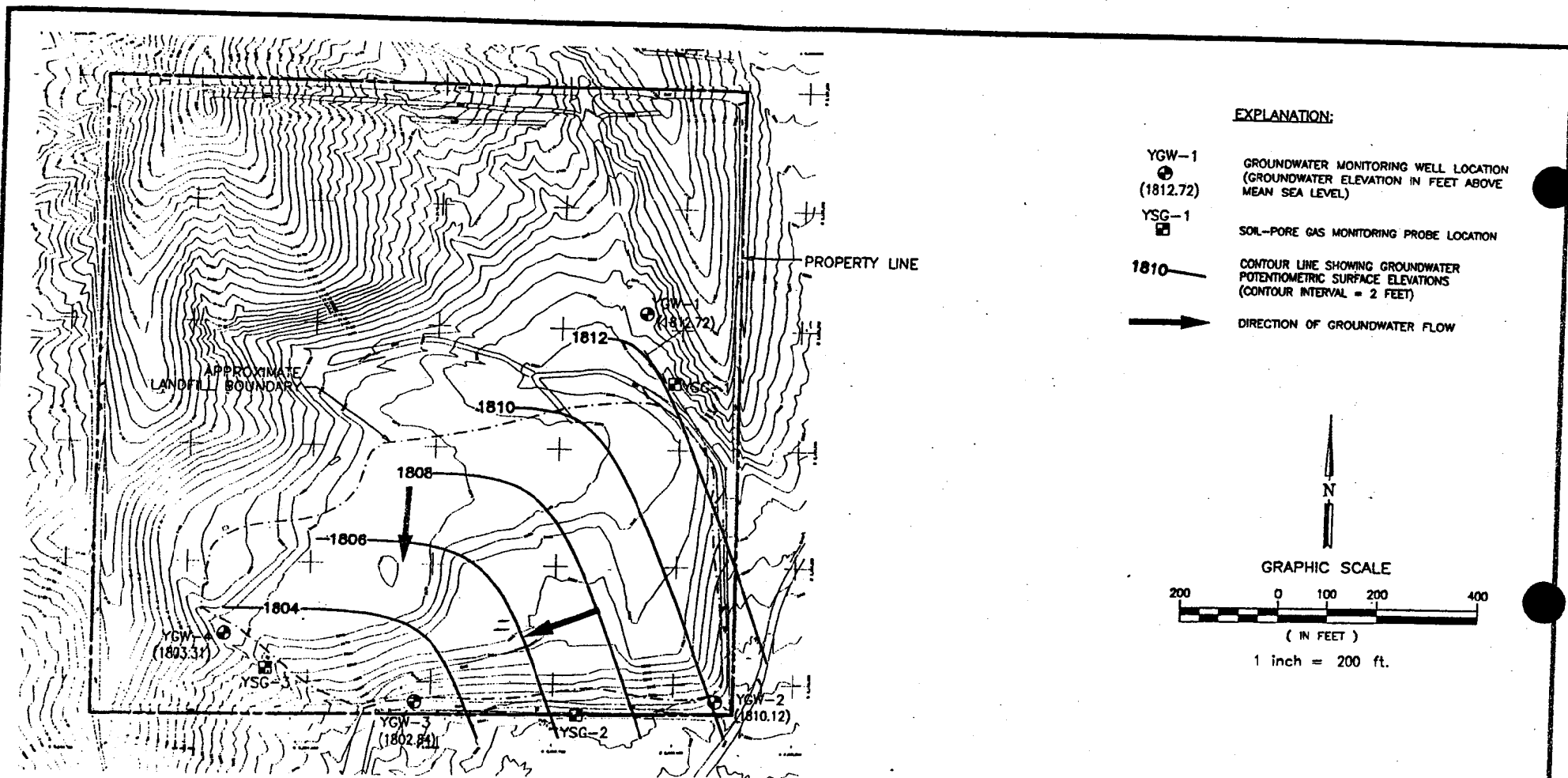


FIGURE 15-1

## ATTACHMENT A

### REFERENCE:

SAN BERNARDINO COUNTY WASTE SYSTEM  
 DIVISION, CAD MAP AS OF 9/13/97.

AUGUST 1999 GROUNDWATER EQUIPOTENTIAL CONTOURS

WATER QUALITY MONITORING REPORT  
 THIRD QUARTER (SUMMER) 1999  
 YERMO SANITARY LANDFILL  
 SAN BERNARDINO COUNTY, CA



**GeoLogic Associates**  
 Geologists, Hydrogeologists, and Engineers

DRAWN BY: VL	DATE: SEPTEMBER 1999	JOB NO. 9975
-----------------	-------------------------	-----------------

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

GENERAL PROVISIONS  
FOR MONITORING AND REPORTING

**ATTACHMENT B**

1. SAMPLING AND ANALYSIS

- a. All analyses shall be performed in accordance with the current edition(s) of the following documents:
  - i. Standard Methods for the Examination of Water and Wastewater
  - ii. Methods for Chemical Analysis of Water and Wastes, EPA
- b. All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board. Specific methods of analysis must be identified on each laboratory report.
- c. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The method used shall also be reported. If methods other than USEPA approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board prior to use.
- d. The Discharger shall establish chain-of-custody procedures to ensure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.
- e. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall ensure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the permanent log book described in 2.b, below.
- f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.
- g. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.



## 2. OPERATIONAL REQUIREMENTS

### a. Sample Results

Pursuant to California Water Code Section 13267(b), the Discharger shall maintain all sampling and analytical results including: strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be obtained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

### b. Operational Log

Pursuant to California Water Code Section 13267(b), an operation and maintenance log shall be maintained at the facility. All monitoring and reporting data shall be recorded in a permanent log book.

## 3. REPORTING

- a. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time and submit a timetable for correction.
- b. Pursuant to California Water Code Section 13267(b), all sampling shall be made available to the Regional Board upon request. Results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.
- c. The Discharger shall provide a brief summary of any operational problems and maintenance activities to the Regional Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.
- d. Monitoring reports shall be signed by:
  - i. In the case of a corporation, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;
  - ii. In the case of a partnership, by a general partner;

- iii. In the case of a sole proprietorship, by the proprietor;
  - iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.
- e. Monitoring reports are to include the following:
- i. Name and telephone number of individual who can answer questions about the report.
  - ii. The Monitoring and Reporting Program Number.
  - iii. WDID Number.
- f. Modifications

This Monitoring and Reporting Program may be modified at the discretion of the Regional Board Executive Officer.

4. NONCOMPLIANCE

Under Section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation under Section 13268 of the Water Code.